

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1, 3, 5, 6, 8, and 9 are presently active in this case.

In the outstanding Official Action, Claims 1, 3, 5, 6, 8, and 9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nishishita (which is presumably U.S. Patent No. 6,397,938, since the other reference of record with this inventor's name is Nishishita et al.) in view of Sugawara et al. (JP3-31694). For the reasons discussed below, the Applicants request the withdrawal of the obviousness rejection.

The basic requirements for establishing a *prima facie* case of obviousness as set forth in MPEP 2143 include (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the reference (or references when combined) must teach or suggest all of the claim limitations. The Applicants submit that a *prima facie* case of obviousness has cannot be established in the present case because no motivation existed to combine the cited references in the manner suggested in the Official Action.

Claim 1 of the present application recites a two-block heat exchanger comprising, among other features, at least one refrigerant circulation space having a cross-sectional flow area that is limited by a plurality of openings provided in series and decreasing in cross-sectional flow area from an open end to a closed end thereof. Claims 3 and 6 of the present

application recites heat exchangers comprising, among other features, a cross-sectional flow area of a first continuous inlet space that is limited by a plurality of openings provided in series and decreasing in cross-sectional flow area from an open end to a closed end thereof.

The Applicants submit that the cited references do not teach or suggest the above features of Claims 1, 3, and 6 of the present application.

The Official Action indicates that the Nishishita et al. reference describes all of the claimed limitations except for the change in the cross-section flow area of a circulation space. The Applicants agree that the Nishishita et al. reference does not disclose a change in the cross-section flow area of a circulation space. Furthermore, the Nishishita et al. reference does not disclose at least one refrigerant circulation space having a cross-sectional flow area that is limited by a plurality of openings provided in series and decreasing in cross-sectional flow area from an open end to a closed end thereof, as recited in Claim 1, or a cross-sectional flow area of a first continuous inlet space that is limited by a plurality of openings provided in series and decreasing in cross-sectional flow area from an open end to a closed end thereof, as recited in Claims 3 and 6.

The Sugawara et al. reference is cited for the teaching of plates that have inflow holes that decrease in area along a path thereof.

However, the Applicants respectfully submit that one of skill in the art would not have been motivated to combine the reference teachings or modify the Nishishita reference to include plates with decreasing hole sizes for the reasons indicated below.

The Nishishita reference describes a heat exchanger (1) formed by laminating a plurality of tube elements (9) and a plurality of fins (5). The tube elements (9) are each provided with a pair of separate and discrete tank portions (2, 3) at one end, and a pair of separate and discrete tank portions (4, 5) at the other end. The Nishishita reference expressly teaches that all of the tube elements (9) are identical to one another. The Nishishita reference states that "since the tube elements to be laminated can be all is formed identically to one another, productivity is improved. Since there is no risk of erroneous assembly which may occur when assembling different parts, a further improvement is productivity is achieved." (Column 5, lines 32-36.) Thus, the Nishishita reference clearly teaches that all of the tube elements (9) are to be formed identically to one another in order to improve manufacturing productivity, and in order to improve assembling productivity. Accordingly, one of ordinary skill in the art would not have been motivated to modify the Nishishita reference to include tube elements that have decreasing flow area, since this would require the production and assembly of tube elements having different shapes (e.g., different flow hole sizes) along the length of the heat exchanger, which would be directly contrary to the teachings of the Nishishita reference. As noted in MPEP 2141.02, the prior art must be considered in its entirety, including disclosures that teach away from the claims. The Nishishita reference clearly teaches away from the proposed combination.

Accordingly, the Applicants respectfully request the withdrawal of the obviousness rejection of Claims 1, 3, and 6.

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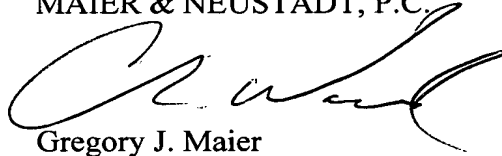
Claim 5 is considered allowable for the reasons advanced for Claim 3 from which it depends.

Claims 8-9 are considered allowable for the reasons advanced for Claim 6 from which they depend.

Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully Submitted,

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